Chapter

Introductory Chapter: ADHD Has Many Faces

Hojka Gregorič Kumperščak

1. Introduction

Attention deficit hyperactivity disorder (ADHD) is nowadays not only the most prevalent neurodevelopmental disorder [1] but also the most troublesome mental disorder that I have come across. A problem arises already with the name. International Classification of Diseases (ICD-10) uses the term Hyperkinetic Disorder [2] whereas as per the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), the term is ADHD [3]. This is not only a semantic problem but the diagnosis criteria are significantly different (DSM has broader and less strict diagnosis criteria, so it encompasses more people) and lead to substantial differences in both its prevalence and treatment [4].

Not so long ago, students at medical faculties were taught that ADHD was a children's disorder that abated during adolescence and was non-existent in adulthood. Today, both clinical experience and all of the studies show that, in the majority, the disorder persists into adulthood but manifests itself differently.

2. From symptoms to broader diagnostic thinking

The most recognisable symptom group of ADHD is hyperactivity that is only seen in childhood. It does not take much knowledge to think of ADHD in a child that moves, runs and climbs incessantly, regardless of the dangers, and of that child being hyperactive. The problem of recognising ADHD in a child is already posed by clinical presentation without hyperactivity (ADD).

Although most children with ADHD have hyperactivity, it already abates in adolescence. It gets replaced by an inner restlessness. Again, we find ourselves in front of a major differential diagnostic problem. Which adolescent is not internally restless or tense? The developmental tasks that adolescents face lead to inner restlessness in at least some developmental periods in almost all of them. Inner restlessness is also a common complaint of adolescents and adults with depression, anxiety, psychosis or other mental disorders. Few experts think first of ADHD in case of inner restlessness.

Another group of ADHD symptoms is equally 'problematic'–impulsiveness. Impulsiveness is also a norm in adolescents since youth is essentially a synonym for quick, reckless decisions–jumping over a ditch where there is a bridge. Impulsiveness is also characteristic of many other mental disorders apart from ADHD. It is at the heart of behavioural disorders, some personality, organic and other mental disorders. The problem with recognising ADHD is its varied symptoms shared with so many other mental disorders or life periods. Which expert would think first of ADHD upon hearing complaints of inner restlessness and impulsiveness in adolescents or adults?

For this reason, it is necessary to broaden the diagnostic thinking out of the boundaries of traditional assessment (based on questionnaires and behavioural scales) in work with patients and parents and diagnostic in general. When working with parents, it is good to know how hereditary the disease is and how important the etiological factor genetic is (around 75%) [1, 5]. It is necessary to know the influence of genetics and think of endophenotypes. The study of vulnerable traits associated with impulsiveness and attention deficit provides for an alternative diagnostic approach. Quantitatively, these traits could define a specific endophenotype. This view would allow for a more precise medical/psychological assessment focus on the patient along their lifespan, avoiding diagnosis based on the number of symptoms [6–8].

3. ADHD can be a devastating disorder if not recognised and treated in childhood

Children with ADHD usually stand out with their behaviour featuring hyperactivity and impulsiveness. Many also have comorbid language difficulties and other learning disorders, often resulting in academic underachievement. For this reason, these children find themselves more quickly, more frequently and more intensively subjected to criticism by teachers, parents and peers. Children with ADHD are more likely to be socially excluded by their peers than children without ADHD. The nature of ADHD makes it harder for children to concentrate and follow the playing rules, forcing them to react too quickly and inappropriately. Children with ADHD can do extremely well in individual sports (swimming, cycling, running), but they do not do well in team sports, sooner or later, they come into conflict with their teammates/coaches/referees precisely because of the characteristics described above. They develop a poor self-image, begin to withdraw from society, and may become anxious, depressed or behaviourally problematic. They are more likely than the general population to seek reassurance from alcohol and psychoactive substances (PAS), using them as a form of self-medication. Thus, secondary problems, difficulties and mental disorders become superimposed on the 'pure clinical picture of ADHD' as the child develops. Less studied, although also important, is the effect of ADHD on language. A 'pure' clinical presentation is no longer seen in adolescents with ADHD. It is hidden in depression/dysphoria/irritability, PAS abuse, anxiety, poor self-image and behavioural disorder. It is only when (if) all these layers are slowly peeled away that we get to the core problem—ADHD.

In adults, there is another problem: ADHD symptoms become internalised. If someone has always been forgetful, deviant, unpunctual, conflicting, then one adopts these symptoms as personality traits rather than symptoms of a disorder that could be treated. This is also how others see them—as distracted, unreliable, rarely finish what they start—not as someone with a mental disorder. Thus, in adults, the problem of ADHD continues into treatment. Even when we have diagnosed ADHD in an adult, it is difficult to motivate them to seek treatment. They ask questions like: if they have been like this since birth, are we going to change their personality with treatment? It takes a lot of education and motivation to get them to accept and persevere with treatment. It is necessary to explain that treatment will enable them to express all the creative and positive things that have not yet come out. It will allow them to concentrate on important things rather than running from one thing to another and finally completing only a few or none of the tasks. Their interpersonal relationships will also change for the better, as they will be able to listen to others and not react so impulsively without any consideration of the consequences.

4. ADHD: is there anything positive?

We should not forget about the possible positive consequences of ADHD—high energy, the ability to react quickly, the ability to multitask, to have innovative ideas, not to stick to routines, and to find new solutions. The list goes on and on. It is said that a person with ADHD had an evolutionary advantage in the past. In the wild, it was vital to be able to pay attention to several stimuli at the same time, to react to any one of them quickly and without thinking about the consequences. Unfortunately, today's high-performance and efficiency-oriented times are not favourable to people with ADHD. Today's times demand good concentration on a single problem, completion of tasks on time, punctuality, precision, the ability to sit through even the most tedious learning/working task, thoughtful reactions and predictable solutions. Nowadays, even 6-year-olds have to sit for 45 minutes at school, which is very questionable from a developmental point of view. Therein lies the answer to the question of how it is that we are diagnosing this disorder increasingly frequently. We are detecting it more because nowadays, people with it are significantly less able to function on a daily basis than they were a few decades ago. If we know that hyperactivity is a symptom of ADHD that abates first, it is understandable that children entering the school at 7/8 years of age did not have the same problems as today's younger first graders. In the not-so-distant past, children were free after school or involved in significantly fewer after-school activities than today, and their potential attention deficit disorder did not have so much 'space' to become a problem. The movement used to be something natural and given to all children, but today we find that children are physically incapable. It is not the present time that has made ADHD, but in today's time, people with ADHD, who are no more numerous than in the past, are simply decompensating sooner.

Author details

Hojka Gregorič Kumperščak[1,2]

1 Child and Adolescent Psychiatry Unit, University Medical Centre Maribor, Maribor, Slovenia

2 Faculty of Medicine, University of Maribor, Maribor, Slovenia

*Address all correspondence to: hojka.gregoric@guest.arnes.si

References

[1] Polanczyk G, de Lima MS, Horta BL, Biederman J, Rohde LA. The worldwide prevalence of ADHD: A systematic review and metaregression analysis. The American Journal of Psychiatry. 2007;**164**:942-948

[2] World Health Organization. International Statistical Classification of Diseases and Related Health Problems (ICD-10). 10th Revision ed. World Health Organization; 2010

[3] American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Arlington, VA: American Psychiatric Publishing; 2013

[4] Taylor E, Döpfner M, Sergeant J, Asherson P, Banaschewski T, Buitelaar J, et al. European clinical guidelines for hyperkinetic disorder - First upgrade. European Child & Adolescent Psychiatry. 2004;(Suppl 13):17-30

[5] Van Loo KM, Martens GJ. Genetic and environmental factors in complex neurodevelopmental disorders. Current Genomics. 2007;**8**:429-444

[6] Miranda P, Cox CD, Alexander M, Danev S, Lakey JRT. In quest of pathognomonic/endophenotypic markers of Attention Deficit Hyperactivity Disorder (ADHD): Potential of EEG-based frequency analysis and ERPs to better detect, prevent and manage ADHD. Med Devices (Auckl). 2020;**13**:115-137. DOI: 10.2147/mder.S241205

[7] Slaats-Willemse D, Swaab-Barneveld H, De Sonneville L, Van Der Meulen E, Buitelaar J. Deficient response inhibition as a cognitive endophenotype of ADHD. Journal of the American Academy of Child and Adolescent Psychiatry. 2003;**42**(10): 1242-1248. DOI: 10.1097/00004583-200310000-00016

[8] Vargas JP, Díaz E, Portavella M, López JC. Animal models of maladaptive traits: Disorders in sensorimotor gating and attentional quantifiable responses as possible endophenotypes. Frontiers in Psychology. 2016;7(206):1-9. DOI: 10.3389/fpsyg.2016.00206